WHAT IS CLAIMED IS:

Sub A1

1. A device for determining a suitable site for sampling physiological fluid, said device comprising:

(a) at least one flow characterization element for determining the flow of said site; and

(b) at least one skin-piercing element for accessing said physiological fluid at said site.

2. The device according to claim 1, wherein said at least one flow characterization element comprises an element capable of determining the temperature of said site.

3. The device according to claim 1, wherein said at least one flow characterization element comprises an element capable of determining red blood cell character of said site.

4. The device according to claim 1, wherein said at least one flow characterization element comprises at least one light source for irradiating tissue with light and at least one detector for detecting the light absorbed by said tissue.

5. The device according to claim 4, wherein at least one light source is capable of emitting light at a wavelength in the range from about 400 nm to 1200 nm.

6. The device according to claim 1, wherein said at least one flow characterization element comprises an element capable of performing Doppler flowmetry.

7. The device according to claim 1, further comprising a microprocessor for processing measurements obtained by said flow characterization element.

8. The device according to claim 1, further comprising an analyte concentration determination reagent test strip.

9. The device according to claim 8, wherein said test strip is an electrochemical test strip.

10. The device according to claim 8, wherein said test strip is a colorimetric test strip.

11. The device according to claim 1, further comprising a means for automatically determining the concentration of at least one analyte in said physiological sample.

12. The device according to claim 1, further comprising at least one fluid enhancing element.

13. The device according to claim 1, further comprising at least one sample type characterization element.

14. The device according to claim 13, wherein said at least one sample type characterization element comprises a pulse characterization element.

15. The device according to claim 13, wherein said at least one sample type characterization element comprises a hemoglobin characterization element.

16. A device for determining a suitable site for sampling physiological fluid, said device comprising:

(a) at least one sample type characterization element for determining the sample type of a particular site; and

(b) at least one skin-piercing element for accessing said physiological fluid at said site.

17. The device according to claim 16, wherein said at least one sample type characterization element comprises at least one light source for irradiating tissue with light and at least one detector for detecting the light absorbed by said tissue.

18. The device according to claim 17, wherein said at least one light source is capable of emitting light at a wavelength from about 400 nm to 1200 nm.

19. The device according to claim 17, wherein said at least one light source includes at least two light sources.

20. The device according to claim 19, wherein each of said at least two light sources is capable of emitting light at a wavelength from about 400 nm to 1200 nm.

21. The device according to claim 16, wherein said at least one sample type characterization element comprises an element capable of determining the pulse character of said site.

22. The device according to claim 16, wherein said at least one sample type characterization element comprises an element capable of determining the hemoglobin character of said site.

23. The device according to claim 16, wherein said at least one sample type characterization element comprises an element capable of determining the hemoglobin concentration of said site.

24. The device according to claim 16, wherein said at least one sample type characterization element comprises an element capable of determining the concentration of oxygenated hemoglobin and deoxygenated hemoglobin of said site.

25. The device according to claim 16, wherein said at least one sample type characterization element comprises an element capable of determining the concentration of total hemoglobin of said site.

26. The device according to claim 16, wherein said at least one sample type characterization element comprises an element capable of determining the oxygenated hemoglobin to deoxygenated hemoglobin ratio of said site.

27. The device according to claim 16, further comprising a microprocessor for processing measurements obtained by said vessel characterization element.

28. The device according to claim 16, further comprising an analyte concentration determination reagent test strip.

29. The device according to claim 28, wherein said test strip is an electrochemical test strip.

30. The device according to claim 28, wherein said test strip is a colorimetric test strip.

31. The device according to claim 16, further comprising a means for automatically determining the concentration of at least one analyte in said physiological sample.

32. The device according to claim 16, further comprising at least one fluid enhancing element.

33. The device according to claim 16, further comprising at least one flow characterization element.

34. The device according to claim 33, wherein said at least one flow characterization element comprises a pulse characterization element.

35. The device according to claim 33, wherein said at least one flow characterization element comprises a hemoglobin characterization element.

36. A device for determining a suitable site for sampling physiological fluid, said device comprising:

(a) at least one flow characterization element for determining the general concentration of vasculature of said site; and

(b) at least one sample type characterization element for determining whether said site comprises arterial or venous vasculature.

37. The device according to claim 36, wherein said at least one of said flow characterization element and said sample type characterization element comprises at least one light source and at least one detector.

38. The device according to claim 36, wherein said at least one flow characterization element comprises a temperature characterization element.

39. The device according to claim 36, wherein said at least one flow characterization element comprises a red blood cell characterization element.

40. The device according to claim 36, wherein said at least one sample type characterization element comprises a pulse characterization element.

41. The device according to claim 36, wherein said at least one sample type characterization element comprises a hemoglobin characterization element.

42. The device according to claim 36, further comprising a microprocessor for processing measurements obtained by said at least one flow characterization element and at least one sample type characterization element.

43. The device according to claim 36, further comprising an analyte concentration determination reagent test strip.

44. The device according to claim 43, wherein said test strip is an electrochemical test strip.

45. The device according to claim 43, wherein said test strip is a colorimetric test strip.

46. The device according to claim 36, further comprising a means for automatically determining the concentration of at least one analyte in said physiological sample.

47. The device according to claim 36, further comprising at least one skin-piercing element.

48. The device according to claim 36, further comprising at least one fluid enhancing element.

49. A method for determining a suitable site for sampling physiological fluid, said method comprising the steps of:

(a) characterizing the flow of said potentially suitable site; and

(c) determining whether said potentially suitable site is suitable based on said flow characterization.

50. The method according to claim 49, wherein said step of characterizing the flow of said potentially suitable site comprises characterizing the temperature of said potentially suitable site.

51. The method according to claim 49, wherein said step of characterizing the flow of said potentially suitable site comprises determining the red blood cell character of said potentially suitable site.

52. The method according to claim 51, wherein said step of determining the red blood cell character of said site comprises irradiating said physiologically suitable site with light and detecting the light absorbed by said physiologically suitable site.

53. The method according to claim 51, wherein said step of determining the red blood cell character of said site comprises characterizing the red blood cell flux of said site.

54. The method according to claim 49, wherein said step of characterizing the flow of said potentially suitable site comprises employing Doppler flowmetry techniques.

55. The method according to claim 49, further comprising the step of characterizing the sample type of said potentially suitable site.

56. The method according to claim 55, wherein said step of characterizing the sample type of said potentially suitable site comprises characterizing the pulse of said site.

57. The method according to claim 55, wherein said step of characterizing the sample type of said potentially suitable site comprises characterizing the hemoglobin of said site.

58. The method according to claim 49, further comprising the step of accessing said physiological fluid at said suitable sampling site.

59. The method according to claim 49, further comprising the step of stimulating the site to enhance the volume of fluid expressed from said site.

60. The method according to claim 49, further comprising the step of determining the concentration of at least one analyte in said physiological sample.

61. The method according to claim 60, wherein said concentration determination comprises transferring said physiological sample to an analyte concentration test strip.

62. The method according to claim 60, wherein said at least one analyte is glucose and said physiological sample is blood.

63. The method according to claim 60, wherein said at least one analyte is glucose and said physiological sample is interstitial fluid.

64. The method according to claim 60, wherein an automated meter performs said concentration determination automatically.

65. A method for determining a suitable site for sampling physiological fluid, said method comprising the steps of:

(a) characterizing the sample type of said potentially suitable site; and

(c) determining whether said potentially suitable site is suitable based on said flow characterization.

66. The method according to claim 65, wherein said step of characterizing the sample type of said site comprises characterizing the pulse of said site.

67. The method according to claim 66, wherein the step of characterizing the pulse of said site comprises characterizing the red blood cell character of said site.

68. The method according to claim 66, wherein the step of characterizing the red blood cell character of said site comprises characterizing the red blood cell flux of said site.

69. The method according to claim 65, wherein said step of characterizing the sample type of said site comprises characterizing the hemoglobin character of said site.

70. The method according to claim 69, wherein the step of characterizing the hemoglobin character of said site comprises determining the hemoglobin concentration of a site.

71. The method according to claim 69, wherein the step of characterizing the hemoglobin character of said site comprises determining the concentration of the oxygenated hemoglobin and deoxygenated hemoglobin of said site.

72. The method according to claim 69, wherein the step of characterizing the hemoglobin character of said site comprises determining the oxygenated hemoglobin to deoxygenated hemoglobin ratio of said site.

73. The method according to claim 65, further comprising the step of characterizing the flow of said potentially suitable.

74. The method according to claim 73, wherein said step of characterizing the flow of said site comprises characterizing the temperature of said site.

75. The method according to claim 73, wherein said step of characterizing the flow of said site comprises characterizing the red blood cell character of said site.

76. The method according to claim 65, further comprising the step of accessing said physiological fluid at said suitable sampling site.

77. The method according to claim 65, further comprising the step of stimulating the site to enhance the volume of fluid expressed from said site.

78. The method according to claim 65, further comprising the step of determining the concentration of at least one analyte in said physiological sample.

79. The method according to claim 78, wherein said concentration determination comprises transferring said physiological sample to an analyte concentration test strip.

80. The method according to claim 78, wherein said at least one analyte is glucose and said physiological sample is blood.

81. The method according to claim 78, wherein said at least one analyte is glucose and said physiological sample is interstitial fluid.

82. The method according to claim 78, wherein an automated meter performs said concentration determination automatically.

83. A method for determining a suitable site for sampling physiological fluid, said method comprising the steps of:

(a) characterizing the flow of said potentially suitable site; and

(b) characterizing the sample type of said site.

84. The method according to claim 83, wherein said step of characterizing the flow of said potentially suitable site comprises characterizing the temperature of said potentially suitable site.

85. The method according to claim 83, wherein said step of characterizing the flow of said potentially suitable site comprises determining the red blood cell character of said potentially suitable site.

86. The method according to claim 85, wherein said step of determining the red blood cell character of said site comprises irradiating said physiologically suitable site with light and detecting the light absorbed by said physiologically suitable site.

87. The method according to claim 85, wherein said step of determining the red blood cell character of said site comprises characterizing the red blood cell flux of said site.

88. The method according to claim 83, wherein said step of characterizing the flow of said potentially suitable site comprises employing Doppler flowmetry techniques.

89. The method according to claim 83, wherein said step of characterizing the sample type of said site comprises characterizing the pulse of said site.

90. The method according to claim 89, wherein the step of characterizing the pulse of said site comprises characterizing the red blood cell character of said site.

91. The method according to claim 90, wherein the step of characterizing the red blood cell character of said site comprises characterizing the red blood cell flux of said site.

92. The method according to claim 83, wherein said step of characterizing the sample type of said site comprises characterizing the hemoglobin character of said site.

93. The method according to claim 92, wherein the step of characterizing the hemoglobin character of said site comprises determining the hemoglobin concentration of a site.

94. The method according to claim 92, wherein the step of characterizing the hemoglobin character of said site comprises determining the concentration of the oxygenated hemoglobin and deoxygenated hemoglobin of said site.

95. The method according to claim 92, wherein the step of characterizing the hemoglobin character of said site comprises determining the oxygenated hemoglobin to deoxygenated hemoglobin ratio of said site.

96. The method according to claim 83, further comprising the step of accessing said physiological fluid at said suitable sampling site.

97. The method according to claim 83, further comprising the step of stimulating the site to enhance the volume of fluid expressed from said site.

98. The method according to claim 83, further comprising the step of determining the concentration of at least one analyte in said physiological sample.

99. The method according to claim 98, wherein said concentration determination comprises transferring said physiological sample to an analyte concentration test strip.

100. The method according to claim 98, wherein said at least one analyte is glucose and said physiological sample is blood.

101. The method according to claim 98, wherein said at least one analyte is glucose and said physiological sample is interstitial fluid.

102. The method according to claim 98, wherein an automated meter performs said concentration determination automatically.

103. A kit for determining a site for sampling physiological fluid, said kit comprising:

(a) at least one device selected from the group consisting of:

i. at least one device according to claim 1,

ii. at least one device according to claim 16, and

iii. at least one device according to claim 36; and

(b) instructions for using said device.

104. The kit according to claim 103, further comprising at least one skin-piercing element.

105. The kit according to claim, 103, further comprising at least one fluid stimulating element.

106. The kit according to claim 103, further comprising at least one analyte concentration characterization reagent test strip.

107. The kit according to claim 103, further comprising at least one meter for automatically determining the concentration of an analyte in said physiological sample.

108. A kit for determining the analyte concentration of a physiological sample, said kit comprising:

a plurality of devices selected from the group consisting of:

i. a plurality of devices according to claim 1,

ii. a plurality of devices according to claim 16, and

iii. a plurality of devices according to claim 36.